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Обзор научной конференции "Цифровые технологии для устойчивого развития: правовые проблемы"

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Аннотация

В статье представлен обзор докладов, прозвучавших на конференции "Цифровые технологии для устойчивого развития: правовые проблемы". Конференция была организована кафедрой предпринимательского права Московского государственного университета имени М. В. Ломоносова (Россия, Москва, 26 ноября 2020 года). Основной темой конференции стала Концепция ООН «Устойчивое развитие» до 2030 года, содержащая семнадцать целей международного сотрудничества. Участники конференции поделились итогами своих исследований по указанной проблематике, обсудили основные подходы к правовому регулированию цифровых технологий в России и в других странах мира, проанализировали соответствие существующих подходов повестке ООН.

В рамках конференции были освещены такие вопросы правоприменения как: содействие устойчивому и инклюзивному экономическому росту, расширение сфер применения цифровых технологий, демократизация доступа к финансовым рынкам и токенизация экономики, правовые проблемы внедрения Интернета вещей, правовая поддержка устойчивой индустриализации и инноваций с использованием искусственного интеллекта и других цифровых технологий. Авторы поделились своими взглядами на перспективы использования цифровых технологий в целях содействия открытому обществу, расширению доступа к правосудию и так далее.

Участники конференции констатировали высокий вклад цифровых технологий в достижение целей Устойчивого развития, предложили множество практических решений для удержания позитивной динамики.

Ключевые слова: цели устойчивого развития, цифровые технологии, блокчейн, искусственный интеллект

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¹ The Digital Law Conference "Digital Technologies for Sustainable Development: Legal Challenges" was held at the Department of Business Law of Lomonosov Moscow State University (Russia, Moscow, November 26, 2020), attracting more than seventy legal scholars from eight countries. This conference featured vast topics and diverse contents presented in sixteen reports.

² The Sustainable Development Goals (SDGs) officially known as Transforming Our World: the 2030 Agenda for Sustainable Development are 17 goals for international cooperation recognized by the UN. The purpose of this conference was to share, learn, and discuss main approaches to legal regulation of "end-to-end" digital technologies in Russia and elsewhere in the world, taking into account that implementation of the leading technologies should contribute to achieving SDGs. The conference reports discussed such issues as the promotion of sustained, inclusive, and sustainable economic growth and digital technologies; the legal aspects of democratization of access to financial markets and tokenization of economy; the legal issues of implementation of the Internet of Things; the legal support for sustainable industrialization and innovation using Artificial Intelligence and other digital technologies; the use of digital technologies to promote an open society for sustainable development, access to justice for everybody, and so on.

³ The first keynote Digital Technologies for Sustainable Development: Legal Mechanisms for Adaptation by Professor Yulia Kharitonova from the Department of Business Law of Lomonosov Moscow State University (Russia) opened the conference. She considered digital technologies as a rather promising tool for achieving the SDGs. Professor Kharitonova analyzed Russia's national practices in the use of blockchain to achieve the SDGs. Primarily goals such as health and well-being, industry/innovation/infrastructure, responsible production and consumption, justice, and effective institutions were applied. Numerous practical examples of the use of blockchain technology were given to show the legal problems (the Novgorod region government blockchain project to monitor the circulation of pharmaceutical products and their provision; Russian Railways (RZD) blockchain solutions in the course of the Digital Railway project).

4 The federal project "Regulatory Regulation of the Digital Environment" as part of the national project "Digital Economy of the Russian Federation" sets the task of providing the legal framework for integrating innovative technologies in the financial market. Several law acts were passed in 2019-2020 to ensure that this goal is achieved. Professor Kharitonova concluded her report by suggesting that the formation of a regulatory framework for the blockchain industry should be based on a complete understanding of the technical nature of blockchain and taking into account the economic characteristics of the new economic benefits arising from the use of blockchain.

5 The keynote by Professor of The Russian Academy of Sciences Larisa Sannikova, the Head of the Center for Legal Research of Digital Technologies, the State Academic University for the Humanities, GAUGN (Russia) focused on The Role of Cryptoassets in the Development of the Blockchain Industry. She considered cryptocurrencies and tokens an essential part of the blockchain industry.

6 Cryptocurrencies are imperative for the functioning of blockchain technology and, on their basis, for the construction of "blockchain apps" that provide different types of services. Payment tokens operating with blockchain applications provide the possibility of payment for different services, as well as the turnover of digital assets (for example, so-called "digital art sale") and enable other options. The economic effects of the introduction of new technologies have led to the "tokenization" of assets. "Tokenization" refers to the release of security tokens representing the value of a real asset. Utility tokens perform applied functions in the crypto asset system.

7 Professor Sannikova presented the legal typology of cryptoassets. This typology covered most current types, groups and kinds of cryptocurrency and tokens and demonstrated their complex relationship. The introduced typology made it possible to highlight the signs and properties of cryptoassets which are imperative for legal regulation. Being a kind of digital assets, cryptoassets have such features as virtuality, turnover, and extraterritoriality. In addition, such properties of cryptoassets as emergence and fluidity were identified. The emergence property is manifested in the constant appearance of new types of cryptoassets and changes in their design. The property of fluidity arises in cryptoassets due to the expansion of their functionality as long as the number of users is growing.

8 In the keynote on International Trade and Sustainable Growth: The Role of AI in Improving Circular Economy Professor Carlo Amatucci from the University of Naples Federico II (Italy) pointed out that the Circular Economy is the main trend in the European Union policy. The use of artificial intelligence in trade would help reduce environmental damages, including carbon dioxide. The policy documents of the European Union provide for a number of measures to reduce the volume of discarded plastic containers. Artificial Intelligence would allow us to eliminate gaps in processing and disposal of materials (including electronics, food production, and much more) with minimal risks to human health and the environment.

9 In the field of sea transportation, digital technologies already allow optimizing trade, debugging ship navigation, calculating optimal routes, and reducing the negative impact on the environment. According to Professor Amatucci, the careful attitude of the

European Union's legislative group to the environmental issues and the development of digital technologies in their interrelation in the short and medium terms will make the European Union the leader of the Circular Economy.

¹⁰ Doris Wydra, Executive Director of Salzburg Centre of European Union Studies of Paris Lodron University (Austria), presented on *The Potential of Blockchain Technology for Public Health: A European Union Perspective*. She conducted a detailed analysis of the potential of the blockchain system for ensuring a decent level of health care and broad access to it. The organization and provision of medical and social assistance are the responsibility of the member states of the European Union in accordance with Article 168 of the Treaty on the Functioning of the European Union. At the same time, the European Union takes a broad approach to the issue of health care. Thus, the Commission takes measures to promote innovation, economic growth and the development of the single market in close coordination with member states, not only for economic but also for social purposes. Blockchain technology plays a special role in the healthcare sector in the context of the complex epidemiological situation and the spread of coronavirus infection (COVID-19).

¹¹ Doris Wydra considers that the use of blockchain technology will be effective for healthcare purposes, since the blockchain has a number of advantages: flexibility, wide access and efficiency, decentralization, transparency and a high level of trust in the system. Moreover, the blockchain system can provide better distribution of services, better statistics, and improved medical communication. However, she also highlighted a number of disadvantages of blockchain technology, such as problems occurring in interactions between patients and medical institutions while using the technology; access to patient data only by patients themselves; insufficient safety guarantees of personal information and privacy.

¹² In the keynote on *Company Law During the Blockchain Revolution. The Rise of "Corptech"*, Professor Raffaele Lener from University of Rome Tor Vergata (Italy) highlighted that the world is forced to move from physical to virtual reality. According to Professor Lener, when holding general meetings, accounting for shares and distributing property among creditors through technical devices, one of the possible technical and legal solutions could be the use of distributed registry technologies (DLT): a blockchain system, as well as smart contracts and tokens.

¹³ In his presentation, Professor Raffaele Lener defined the blockchain as a space where tokens are placed and interact with the data of other participants using smart contracts without any intermediaries. Features of the blockchain system are identified as its decentralization - the "registry" controlled by a peer-to-peer network of participants; autonomy - the blockchain recording transactions made by participants of the system, without control by any Central management body; and transparency - special form-tokens, where information is stored, allow their holder to be recognized as the person who issued the token, and as the holder of a certain amount and/or type of rights. A distinctive feature of smart contracts as a virtual machine is that they are programmed to perform a specific action until the action is completed.

¹⁴ Professor Lener suggested extending the use of the DLT system to the exercise of corporate rights: for voting at general meetings, making a statement during the

shareholders' meeting and recording it in the minutes, and so forth. The DLT system can help law enforcement agencies fight against such software as Deepfake, which allows to replace the face or voice of one person with the biometric parameters of another, even in real time. This is the advantage of distributed registry technology over conventional video communication and communication systems.

¹⁵ Raffaele Lener, having analyzed the current Italian legal regulation, noted that Italian laws not only prevent the introduction of DLT innovations, but also are not sufficiently "technological" in themselves (for example, for the implementation of administrative rights and voting rights). He expressed hope for expanding the use of new technologies in the corporate law system and noted that: "In order to solve urgent problems, we do not always have to wait for changes in the law or technology. Sometimes it's just enough to change your habits".

¹⁶ In the presentation on Protection of Intellectual Property Rights in the Field of Virtual and Augmented Reality Professor Elena Bogdanova, the Department of Civil Law of Kutafin Moscow State Law University (Russia), noted that the development of modern technologies has a great impact on people's everyday life and can radically change the existing social system in the near future. According to Elena Bogdanova, a new way of interaction between subjects is a real-virtual space, in particular, the so-called "mixed reality" spectrum.

¹⁷ The world of virtual reality is a world created with the help of technical means where a person can perceive with visual, auditory, tactile and other senses. The specificity of virtual reality is that users are given the freedom to adapt, change and expand existing virtual worlds and virtual objects. The virtual world system consists of virtual objects and the process of their interaction. From a technical point of view, the virtual environment may include: a computer code (software) that creates a virtual environment, the audiovisual work (representing a collection of graphics, music, different texts, videos, and so on), interactive media, including the tactile components of the environment, and so on.

¹⁸ In view of the diverse elements that make up the concept of the virtual (augmented) reality, the issue of creators' intellectual property rights and their protection is of particular importance. Professor Bogdanova has carried out a thorough analysis of the Russian legislation on intellectual property protection.

¹⁹ Under Article 1261 of the Civil Code, computer programs are protected by copyright. They are a product of intellectual activity, since computer programs arise from person's intellectual and mental resources, and their creation requires special knowledge on the part of the author. However, legal protection only applies to computer programs that exist in an objective form. Their legal protection is similar to the protection of literary works. If the program is part of a device, such a program can be patented together with the corresponding device.

²⁰ Virtual reality applications as objects of rights protection cannot be reduced exclusively to computer programs. For example, virtual objects mimic the properties of real objects, while virtual worlds usually mimic real worlds. Elena Bogdanova believes that in the near future, both the legislature and the court practice will have to find a balance between the interests of, on the one hand, the creators of virtual worlds and

artists, and, on the other hand, the society, which is interested in the use and development of these virtual works, as well as in the broad opportunities to change the virtual reality scenario independently.

²¹ Guido Noto La Diega, Associate Professor of Intellectual Property and Privacy Law of the University of Stirling (Scotland, UK) discussed on The Regulation of the Internet of Things: Fit for the Sustainable Development Goals? Ambitious tasks of SDGs pose a number of pressing issues for the modern world, the early resolution of which depends on the society standard of living in the near future. In the process of achieving SDGs, the key mechanism is the "Internet of Things". Professor La Diega discussed "Internet of Things" as a general term that combines autonomous and artificial intelligent technologies. These technologies are successfully used in healthcare and medicine, transport and other infrastructures. In order for "Internet of Things" to function at the required level, the state must ensure proper legal regulation of technologies. This branch of law is referred to as intellectual property law.

²² Guido Noto La Diega believes that intellectual property law is a right that provides temporary monopolies on inventions, literary works and other types of intellectual property. Intellectual property law is a vital element of any sustainable development strategy, as it promotes innovation and economic growth, and improves access to health care while reducing economic and legal inequalities. However, today the law cannot offer the Internet of Things a more perfect tool than patent law.

²³ Professor La Diega concluded that today the legal regulation of the Internet of Things, as well as intellectual property law in general, remain not sufficiently effective for the purposes of Sustainable Development. Moreover, he questioned whether the law is able to regulate "Internet of Things" at all. Guido Noto La Diega did not rule out that Internet of Things is not regulated by intellectual property law, and since evolving technologies entails changing the policy of the regulator, the technologies themselves "manage" lawmaking and dictate their own conditions to the legislature.

²⁴ Marilena Rispoli Farina, former Professor of Law at the University of Naples Federico II (Italy), presented on Sustainable Finance, Transparency and Financial Education for Business. In terms of the European Union, Sustainable Development defines the process of taking due account of environmental (such as prevention of global warming, natural disasters) and social infrastructure (for example, problems of inequality, inclusivity, jobs, and so on) in order to invest, which should potentially lead to sustainable activities and increased investment in the long term. The management of private and state-owned enterprises is of particular importance in this area.

²⁵ The main direction in the context of ensuring environmental security is contained in the 2015 UN Paris climate agreement, to which the EU is also a party. The European Union strongly supports the transition to a low-carbon and sustainable economy. However, working in the global direction of Sustainable Finance and Sustainable Development requires financial literacy of businesses. According to Marilena Farina, the main task of modern legal scholars is not only to educate entrepreneurs on the legal regulation of domestic residency, but also guide them through the law of international organizations.

²⁶ In the presentation on The Proliferation of Artificial Intelligence in Vanquishing Human Arbitrator: A Maneuver towards Machinery, Doctor Niteesh Kumar Upadhyay and Doctor Singh Apeksha from Galgotias University (India) discussed legal issues connected to artificial intelligence.

²⁷ According to the scholars, this largely perfect technology can be applied in many different sectors and industries. Regarding the legal framework, the use of artificial intelligence is possible in the field of Alternative Dispute Resolution (ADR). Artificial intelligence is designed to help parties resolve disputes without legal proceedings, including mediation, arbitration, conciliation, and negotiation. In India, such initiatives are being gradually developed.

²⁸ Finally, Dr. Nitesh Kumar and Dr. Singh Apeksha raised questions about the inflexible legal system in India and other Asian countries, the risk of biases and inaccuracy of autonomous machine operation without human intervention, and the eco-ethics of using artificial intelligence in all areas of public life.

²⁹ Doctor Valter Shuenquener de Araujo from Rio de Janeiro State University (Brazilian) made a presentation on Brazilian Electronic Judicial System: the Successful Case of the Brazilian PJE[GK1]. The Brazilian judicial system is overloaded with a large number of pending cases. According to Doctor de Araujo, ninety million cases are heard in Brazilian courts every year. However, the system successfully copes with this load. The success is conditioned by active use of digital technologies in case management, since ninety-nine cases out of every million are heard completely online.

³⁰ Online hearings are held on the state-supported online platform Processo Judicial Eletrônico (PJE). This platform consists of several "sub-platforms" for different areas of law enforcement. By the time of the COVID-19 pandemic, Brazilian courts were ready to operate online without complex negative consequences for courts and lawyers. The PJE platform is based on cloud technology, which makes it possible to access PJE in any court and anywhere. The system complies with the principles of efficiency, allowing reasonable time for case revisions, and reducing the cost of the process.

³¹ Lawyers and IT specialists in Brazil are faced with the task of compulsory standardization of the process with the calculation of costs from the budget and taking into account the judges involved in the work. The PJE allowed the process to become more effective than that at the pre-pandemic time. The PJE also proved that at present justice in Brazil exists in the online space as well.

³² In the presentation on Legal Regulation of Investments in the Use of Various Organizational Forms in the Field of Cryptocurrencies and Innovative Technologies, Professor Anna Belitskaya, the Department of Business Law of Lomonosov Moscow State University (Russia), raised the problem of imperfections in the current legal regulation of investments in the digital economy. The speaker noted the social nature of investment, in the development of which both the investors and society as a whole are interested.

³³ Anna Belitskaya considers crowdfunding as an alternative way to attract funding for investment projects, which should be closely monitored by Bank of Russia.

She suggested using the construction of a transaction for the purchase of investment project tokens that certify the property rights of investors as a specific construction for investing through investment platforms.

³⁴ The imperfection of legal regulation of investment activities, in particular, and the legal status of digital assets is a recognized problem. Professor Belitskaya believes that additional legal regulation can only complicate the construction of investments in digital assets. Loan agreements, purchase and sale of equity securities, as well as agreements of a simple or investment partnership, and the issue of bonds by a specialized financial company are sufficient to ensure the proper legal framework for the development of investments in digital assets. The issues of point-by-point improvement of legislation, such as fixing the structure of investment through the purchase of tokens, clarifying the status of subjects of investment relations in the digital age, and some other questions remain unresolved.

³⁵ Pawee Jenweeranon from Faculty of Law of Thammasat University (Thailand) presented on FinTech, Governance and Sustainability - Key Lessons Learned in Asia. In the past few years financial technologies (FINTECH) have become widespread in all regions of the Association of Southeast Asian Nations (ASEAN). This is due not only to the growth of the economies of the ASEAN countries, but also to a comprehensive increase in the spread of smartphones and the number of Internet users around the world. Pawee Jenweeranon pointed out that in some jurisdictions the states create special rules for supervision and / or support of the financial technology sector. This approach is useful for balancing market stability and stimulating innovation.

³⁶ One of the notable developments in the field of FINTECH legal regulation in Asia, according to the author, is the emergence of an alternative Islamic financial platform that complies with Sharia or Islamic principles. This led to the creation of another independent industry - Islamic Finance. Islamic Financial Services Board (IFSB) monitors the development of FINTECH and issues guidelines for countries in the region on the development of law.

³⁷ The speaker considered electronic payments (QR-code system) to be the most promising direction of FINTECH in Asia. In accordance with Article 5 of the ASEAN Framework Agreement on Electronic Commerce, member states have committed themselves to adopt a regulatory and legislative framework for Electronic Commerce. The framework agreement shows the importance of electronic payments and helps ensure a common approach across the region.

³⁸ Central banks in South-East Asia have taken a cautious stance on cryptoassets. According to Pawee Jenweeranon, this is due to the fact that regulators are well aware of the potential harm of cryptocurrencies, primarily for consumers, in cases where these products are used fraudulently.

³⁹ Among other FINTECH achievements, the author highlights InsurTech (new technologies in insurance), since it is the exact area where legal regulation lags the most behind the achievements of technology. All ASEAN member states continue to regulate insurance technologies in general through pre-existing insurance regulations and legislation. The above-mentioned requirements demand from lawyers to carefully study the current legislation.

⁴⁰ Doctor Aleksandr Alekseenko, the Department of Civil Law Disciplines, Vladivostok State University of Economics and Service (Russia) discussed on Impact of Robo-advisors on the Sphere of Investments. Digital technologies have a huge impact on economic processes in modern society. In a very short period of time, new methods of doing business and entering into contracts have emerged. All these innovations have definitely affected the investment sphere as well. Today, on the basis of technologies of artificial intelligence Robo-advisors play a key role in the financial markets. For example, the Russian investment company Tinkoff JSC uses the AI Research Engine service, which analyzes securities in accordance with various criteria: growth potential, analysts' forecasts, dividend yield, stock liquidity, and risk parameters.

⁴¹ Since 2008, robot advisors have been widely used in the field of personal financial consulting. Thanks to this new technology, private investors can quickly get an analysis of financial markets and recommendations on investment strategies from computer programs. Assistant robots are most common in the financial market, for example, robots from VTB, Alfa-Capital, AK-Bars, and Sberbank can provide financial advice, form a client's investment portfolio, and manage it. The use of such assistants reduces the costs of potential services, which investors pay to financial advisers. As a result, financial advisers' role is reduced to simple service monitoring.

⁴² Dr. Alekseenko defined a robot consultant in general terms as software (a computer program or an application) containing an algorithm that ranks or compares consumer interests with financial products on a personalized basis. The author concurrently highlighted a number of disadvantages of robot assistants use in business. Some of the downsides include the inability of the robot to perform fiduciary duties; lack of critical thinking in the robot increasing the risk of the client providing erroneous answers and leading to the incorrect selection of the investment strategy by the robot. Moreover, since robot consultants do not have creative thinking, they can undermine the stability of the financial market by making similar recommendations and executing the same investment strategy for different individual cases. These and other problems pose new challenges to the law of Russia and elsewhere in the world.

⁴³ In the presentation on New Technologies and the Challenges to the Law Beyond States Authorities: Compliance and International Contracts as Global Regulators, Matheus Luiz Puppe Magalhães from Goethe University Frankfurt (Germany) emphasized that the growing role of digital technologies is changing the development of private international law. In his opinion, cutting-edge technology is a new form of *lex mercatoria*.

⁴⁴ Due to this trend, the legal world is facing a number of new challenges that need to be addressed through interaction and joint efforts of lawyers from all over the world. First, the development of digital technologies requires a new solution to the issue of jurisdiction and legislation. Second, it is necessary to determine the general trend of legal regulation in the field of international trade in the form of Electronic Commerce. Third, it is necessary to determine at the international level the permissibility of using certain technologies in the most critical areas of life for society.

⁴⁵ Contrary to the popular opinion that international organizations should become the new actors and creators of the "new" law of information technologies, Matheus

Magallanes insisted that the main engine of effective legal regulation of the sphere of information technologies in private international law has been and remains private individuals. That is why the legal compliance of private companies and international non-governmental agreements should now be given a special role as global legal regulators in the context of digitalization.

⁴⁶ In the presentation on Digital Technologies for Sustainable Development: A Challenge of Sustainability and Inclusivity Perspective, Matthew O. Gidigbi from Modibbo Adama University of Technology, Yola (Nigeria) focused on the fact that Sustainable Development is a condition for economic prosperity in all spheres of society, including social and economic stability and environmental conditions.

⁴⁷ The key social aspect of the concept of Sustainable Development, according to Matthew O. Gidigby, is the eradication of poverty, that is, providing access to financial resources for individuals. He suggested that digital technologies can serve as a reliable tool for developing business opportunities, and therefore provide jobs in the field of digital devices.

⁴⁸ The conference once again demonstrated the rising significance of research in legal regulation of digital technologies for sustainable development.

Digital Technologies for Sustainable Development: Legal Challenges. Conference Review

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Abstract

This is a conference review of Digital Law Conference dedicated to the legal challenges of digital technologies for sustainable development. It was held at the Department of Business Law of Lomonosov Moscow State University (Russia, Moscow, November 26, 2020). The Sustainable Development Goals (SDGs) officially known as Transforming Our World: the 2030 Agenda for Sustainable Development are 17 goals for international cooperation recognized by the UN. The purpose of this conference was to share, learn, and discuss main approaches to legal regulation of "end-to-end" digital technologies in Russia and elsewhere in the world, taking into account that implementation of the leading technologies should contribute to achieving SDGs. There has been considered the legal issues of the application of various digital technologies through the prism of achieving SDGs: the promotion of sustained, inclusive, and sustainable economic growth and digital technologies; the legal aspects of democratization of access to financial markets and tokenization of economy; the legal issues of implementation of the Internet of Things; the legal support for sustainable industrialization and innovation using Artificial Intelligence and other digital technologies; the use of digital technologies to promote an open society for sustainable development, access to justice for everybody, and so on. The contribution of digital technologies for sustainable development was well-illustrated, and many actionable solutions were proposed.

Keywords: sustainable development goals, SDGs, digital technologies, blockchain, artificial intelligence

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